
New Species and New Combinations of *Urtica* (Urticaceae) from South America

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ABSTRACT. Two new species, *Urtica peruviana* and *U. pseudomagellanica*, are described from Peru and Bolivia, respectively. Also, the new combinations *U. lilloi* (Hauman) Geltman and *U. magellanica* subsp. *bracteata* (Steudel) Geltman are made.

The genus *Urtica* includes about 70 species that are distributed in temperate regions of the Northern and Southern Hemispheres and at high elevations in the tropics.

The most significant taxonomic characters in the genus are those of life forms, inflorescences, leaf blade, stipules, indumentum, and characters of the fruits. The majority of *Urtica* species are annual and perennial herbs, but a few are shrubs and small trees.

Almost all species (except for a few specialized ones, such as *U. glomeruliflora* Steudel and *U. pilulifera* L.) have two main types of inflorescence. It is necessary to clarify the terminology of inflorescence morphology used below. In general I follow that of Golenkin (1894, 1895), who made a considerable contribution to the understanding of the nature of Urticaceae inflorescences. The first type I name "dichasium-like inflorescence"; the same type was named by Golenkin as "modified dichasium." Such inflorescences are usually shorter than the petioles of adjacent leaves and are characteristic of such well known species as *Urtica urens* L. Inflorescences of the second type, which I name "thyrsoid," have a monopodial axis (branching as in *U. dioica* L. or nonbranching as in *U. membranacea* Poiret) bearing small dichasial clusters of flowers. Golenkin named such inflorescences as "dorsiventral," but, following more modern terminology (Troll, 1964), they should be referred to as a "thyrsus." Usually such inflorescences are longer than the petioles of adjacent leaves. It is also significant that the inflorescences are unisexual or androgynous. Characters of inflorescences are often significant for delimitation of taxa at sectional and subsectional levels; this is especially true for species distributed in the Northern Hemisphere. However, in South America such characters are essential for delimitation at the species level.

Shape and size of the leaves are significant mostly at the species level. It is also necessary to mention that most *Urtica* species usually have smaller leaves at upper nodes and larger ones at lower nodes. To facilitate comparison with other species, all leaf measurements below are for leaves at the lowermost nodes bearing inflorescences. Stipules can be connate or free, which, together with their form, is taxonomically significant. *Urtica* species normally have cystoliths (visible mainly on the upper surface of the leaf blade) and their form is often also of taxonomic significance.

The indumentum of *Urtica* species consists of stinging and nonstinging hairs. Each type of hair represents an independent taxonomic character. Stinging hairs are always present at stem nodes, on petioles, and at inflorescence axes but can be absent from leaf blades. A special case is the presence of stinging hairs on the calyx lobes. When using the terms "pilose," "pubescent," or "glabrous" I have in mind presence or absence of nonstinging hairs only.

During work on a revision of South American *Urtica*, several specimens could not be referred to known taxa and certainly represent new species.

Urtica peruviana Geltman, sp. nov. TYPE: Peru. Depto. Cajamarca: prov. Contumazá, El Tunel (Cascas-Contumazá), 2700 m, *Sagastegui, Guzmán, Leiva & Tellez 12630* (holotype, MO!). Figure 1.

Ab *Urtica leptophylla* Kunth inflorescentiarum axibus ramificantibus differt, ab *Urtica macbridei* Killip inflorescentiis androgynis (non unisexualibus) ramificantibus dignoscitur.

Perennial herb ca. 1 m. Stems erect, with a few stinging and nonstinging hairs, sometimes almost glabrous. Leaf blades on petioles 1–3 cm, ovate or ovate-cordate, 6–8 cm long and 3–5 cm wide, apex acuminate, base cordate or rounded, margin dentate-crenate with 20–30 teeth on one side of leaf, bearing a few stinging hairs on the upper surface and scattered nonstinging hairs on both sides, but mainly on nerves beneath; cystoliths mainly punctiform, rarely oblong. Stipules connate in pairs at

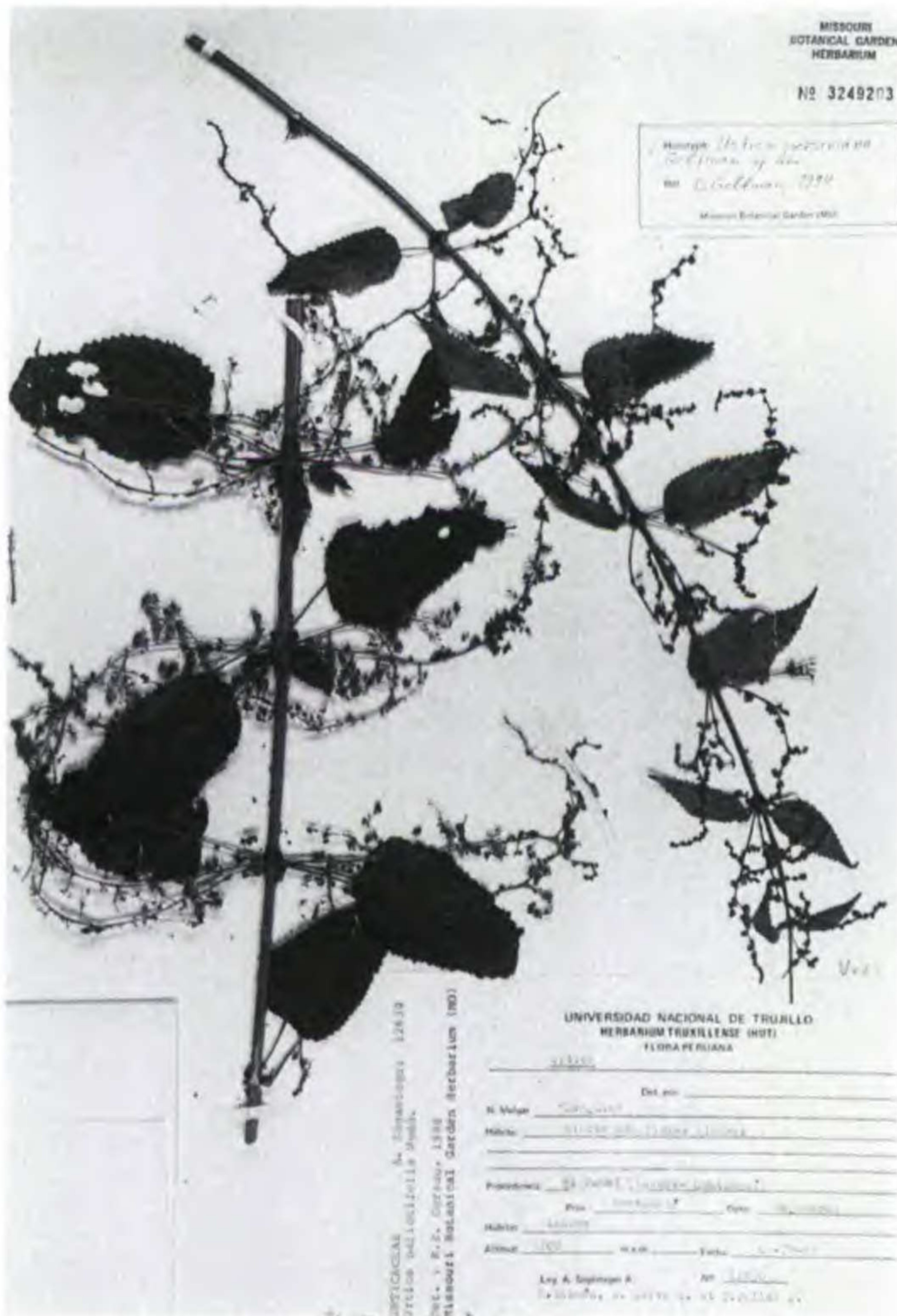


Figure 1. Holotype of *Urtica peruviana*.

least on $\frac{3}{4}$ of their length, ovate-oblong, 5–7 mm long, adpressed pilose. Inflorescences axillary, androgynous (sometimes inflorescences at upper nodes predominantly pistillate, at lower nodes predominantly staminate), thyrsoid, with branching axes, at least at median and lowermost nodes, nearly the same length as the leaves or longer. Enlarged (dorsal) calyx segments of pistillate flowers pilose, without stinging hairs, in fruit two times longer than the lateral segments. Fruits suborbicular to ovate, often with a short apical nozzle, 1.5–1.7 mm long, 1.3–1.7 mm wide.

Urtica peruviana is known only from Peru, from the vicinity of Guzmango (Depto. Cajamarca, prov. Contumazá), and probably is locally endemic.

This species in general habit and especially in leaf blade shape resembles *Urtica leptophylla* Kunth (syn. *U. ballotaefolia* Weddell) and *U. macbridei* Killip. However, it differs from the former in having inflorescences with branching axes, and from the latter in having androgynous (not unisexual) inflorescences. Clearly, these three species, along with *U. longispica* Killip, are closely related and should be referred to the same section. This is an unusual case in the genus: as mentioned above,



Figure 2. Holotype of *Urtica pseudomagellanica*.

Old World sections and subsections, as a rule, differ mainly by inflorescence structure.

Paratypes. PERU. **Cajamarca:** 2600 m, *Sagastegui & Samame 2935* (NY); alrededores de Guzmango, 2500 m, *Sagastegui & Mostacero 9132* (MO), *Sagastegui et al. 9646* (MO); La Herilla (Guzmango), 2800 m, *Sagastegui et al. 9704* (MO); alrededores de Guzmango, 2400 m, *Sagastegui 11413* (MO).

***Urtica pseudomagellanica* Geltman, sp. nov.**
TYPE: Bolivia. Depto. La Paz: prov. Murillo, Zongo valley, 25.2 km below the dam of Lago Zongo, disturbed moist forest, 2700 m, *Solomon 13101* (holotype, MO!; isotype, LPB). Figure 2.

Haec species *Urticae echinatae* Bentham et *Urticae magellanicae* Poir. ex parte similis, segmentis calycis florum pistillorum fere glabris pilum unum urticantem ferentibus differt. Ab *Urtica lilloi* (Hauman) Geltman inflorescentiarum axibus dichasialibus crassiusculis, non filiformibus thyrsoides dignoscitur.

Perennial herb 30–100 cm tall. Stems erect, mostly solitary, with scattered stinging hairs, almost without nonstinging hairs. Leaves opposite, with petioles 1.7–4.5 cm long, ovate, 9–11 cm long and 3–7 cm wide, apex acuminate, base rounded or cuneate, margin dentate with 17–19 pairs of teeth,

from almost glabrous to sparsely pilose, with scattered stinging hairs mainly on upper surface; cystoliths punctiform. Stipules free, oblong-triangular, 3–5 mm long, sparsely pilose at margin. Inflorescences axillary, androgynous, with dichasium-like branched axes, shorter than petioles (at upper nodes sometimes equal to or slightly longer than petioles). Enlarged (dorsal) calyx segments of pistillate flowers almost glabrous, with a single stinging hair on each, in fruit ca. 2 times longer than lateral segments. Fruits elliptic or ovate, 1.2–1.3 mm long and 0.7–0.9 mm wide.

Known from Bolivia, La Paz department, and two collections (unfortunately, with poorly developed inflorescences, so determination is provisional) from west Santa Cruz and Tarija departments. Grows at 2700–3300 m in forests, often on disturbed soils.

This species resembles *Urtica magellanica* in general habit, but has a different inflorescence structure (dichasium-like, not thyrsoid) and mostly punctiform rather than linear cystoliths. It can be easily distinguished from *U. magellanica* and large specimens of *U. echinata* by the almost glabrous dorsal calyx segments of pistillate flowers each with a single stinging hair. From *U. lilloi*, which is also characterized by this feature, it can be distinguished by the usually shorter inflorescences with incrassate, not thin axes.

Paratypes. BOLIVIA. **La Paz:** Valle de Corani, Adolfo 412 (US); Unduavi, Nord-Yungas, 3300 m, Buchtien 2817 (NY, US); Unduavi, 8000 ft., Rusby 1256 (NY, US); Valle del Río Zongo, 26.4 km al N de la cumbre, bosque humedo, disturbido, 2750 m, Solomon 17482 (LPB, MO). **Santa Cruz:** ca. 19 km W of Comarapa on Carretera Fundamental 4, ca. 8400 ft., Davidson 3849 (MO). **Tarija:** Toldos bei Bermejo, 1900 m, Fiebrig 2233 (G, K).

In the process of revision I also decided to change the status of two existing taxa in the genus.

Urtica lilloi (Hauman) Geltman, stat. et comb. nov.
Basionym: *Urtica magellanica* Poiret subsp. *lilloi* Hauman, Anales Mus. Nac. Hist. Nat. Buenos Aires, 32 (Cat. Phan. Argentine, 2): 415. 1925. TYPE: Argentina. Tucumán: Siambón, El Matadero, alt. 1100 m, Lillo 1042 (holotype, LIL not seen).

This taxon certainly merits species rank. It differs from *Urtica magellanica* in having inflorescences with branching axes and the dorsal calyx

segments of pistillate flowers almost glabrous, bearing only a single stinging hair; typical *U. magellanica* has inflorescences with nonbranching axes and calyx segments bearing only nonstinging hairs. In general habit *U. lilloi* resembles *U. incisa* Poiret, distributed in New Zealand, Tasmania, and South Australia, but differs in the androgynous rather than unisexual inflorescences and the form of the leaves.

Urtica magellanica Poiret subsp. ***bracteata*** (Steudel) Geltman, stat. et comb. nov. Basionym: *Urtica bracteata* Steudel, Flora 33: 258. 1850. *Urtica magellanica* var. *bracteata* (Steudel) Weddell, in DC. Prodr. 16 (1): 47. 1869. TYPE: Ad sepes secus vias Rancagua Chili, Bertero 737 (lectotype, designated by Geltman (1994), P).

Similar to the typical subspecies in general habit, but differing in having the stipules of the upper node connate at the base in pairs and in the inflorescence structure. Typically in *Urtica magellanica* inflorescences are androgynous throughout. However, in subspecies *bracteata* the inflorescences at the upper nodes are only pistillate, those at lower nodes are androgynous or sometimes staminate.

This subspecies has a restricted distribution, occurring only in Chile, mostly in Regions IV, V, and Metropolitana (isolated locality found in Region IX—Isla Mocha), while the typical subspecies ranges from southern Chile and Argentina to Bolivia and Peru.

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